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annual report
nova scotia
power commission

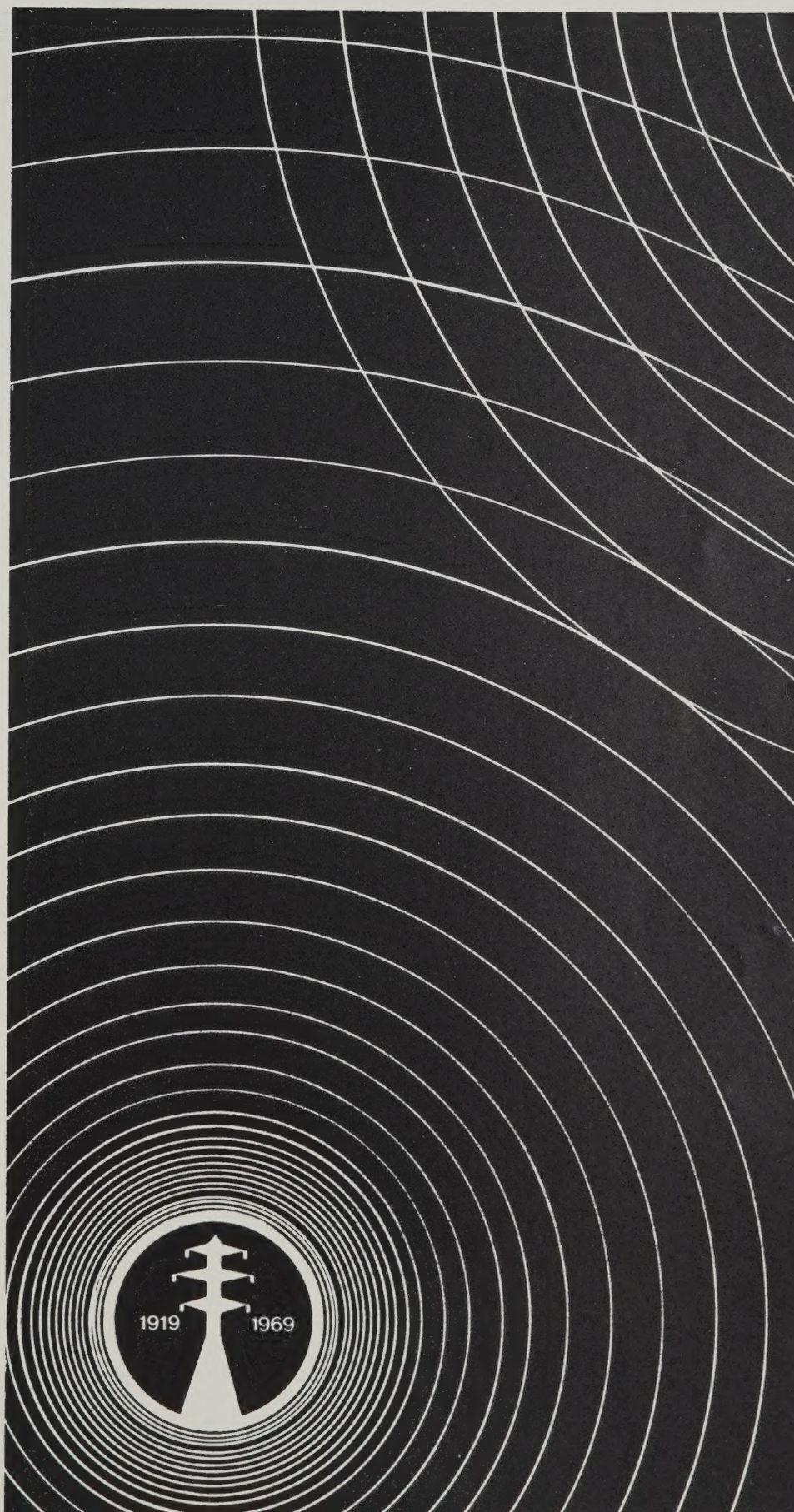


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CONTENTS

Letter from the General Manager	5
Operations	14
Engineering	15
Personnel	17
Point Tupper Opening	18
Staff Services	21
Marketing	21
Public Relations	23
Finance	25
Consolidated Balance Sheet	26
Supplementary Balance Sheet Information	28
Statement of Operations	29
Inflow and Outflow of Funds	30
Assets and Revenue	31
Operating and Physical Statistics	32
Commissioners and Executive	34
System Map	35





LETTER FROM THE GENERAL MANAGER

To the Hon. G. I. Smith
and Commissioners of the
Nova Scotia Power Commission

Gentlemen:

It is my pleasure to submit the 50th Annual Report of the Nova Scotia Power Commission and its wholly-owned subsidiaries for the fiscal year ended March 31, 1970.

It will be noted that the fiscal year of the Power Commission has been changed so as to terminate March 31st, rather than November 30th as in previous years. Due to this change, our current report covers a 16-month period, and all statistics relate to this extended span.

As signified by the cover of this report, 1969 was the 50th anniversary of the Nova Scotia Power Commission. It is particularly appropriate that this year has been a record-breaking period in all aspects of our operation. The information contained in this report will, it is hoped, not only provide details of the major accomplishments which made our anniversary a milestone, but also leave the reader with an appreciation of the year's importance and a sense of the direction which the Commission is lending to the efforts of the entire province.

Highlighting the list of work completed last year was the completion of our two newest generating units at Point Tupper and Trenton; final construction of more than 110 miles of high-voltage line; planning for a new 25,000 kilowatt gas turbine; the purchase of the municipal utilities of the towns of Glace Bay and Bridgewater; total deliveries during the 16-month period of slightly less than two billion kilowatt



The large Onslow substation could be considered the hub of the Commission's systems. From here, power can be sent to Cape Breton, New Brunswick, or to the western end of the province at a second's notice, being fed by many of the Commission's 27 generating stations.



**Mr. L. F. Kirkpatrick,
General Manager**

hours; an intensified marketing and sales promotion programme leading to retail sales increases of more than 12 per cent; and the commencement of an accelerated rehabilitation of older distribution facilities.

The 80,000 kilowatt Point Tupper thermal station, the world's largest radial-flow, back-pressure installation was synchronized with the system in July 1969. This plant represents a somewhat different concept than usually adopted by utilities in North America, in that it is closely integrated through the supply of process steam with the operation of the near-by heavy water plant and with its advanced and unusual design, is able together with the heavy water process to make nearly complete utilization of the energy in the steam and as a consequence to generate power very economically.

Montreal Engineering Company Limited, consulting engineers for the project, have subsequently received the "Award of Engineering Excellence" from the Association of Consulting Engineers of Canada for their design work on this plant. One of 29 entries in the annual contest, Point Tupper won one of five first prizes.

Another 150,000 kilowatts capacity was added to our system with the commissioning of Trenton No. 5. This \$27 million project, the largest thermal unit in the Atlantic Provinces, was by far the largest capital undertaking which the Commission has



ever tackled. This unit will require more than 400,000 tons of Nova Scotia coal or the equivalent annually and may prove to be an important market outlet for the local coal industry.

Co-incident with the addition of the generating capacity, extensions were made to the transmission system to serve new loads and strengthen interconnecting facilities. A double-circuit 138,000 volt line was constructed between Trenton and Onslow and a new circuit from Stellarton to Sheet Harbour was completed. Major extensions were made to the transmission network at the Strait of Canso, at Tusket and to the Onslow switching station to accommodate these additions to the high-voltage system.

During the winter months, plans were completed for the installation of the province's first gas turbine. This unit which will be located near Yarmouth, has been designed to provide peaking capacity and improve system reliability in the western and southern areas of the province.

The Caledonia Power and Water Board, providing electric service to 6000 customers in the town of Glace Bay, became part of the Commission's network on October 17, 1969. This purchase completed the consolidation of all utility electric service in Cape Breton under the Power Commission.

The total addition of new customers rose to 9000 in January, with the purchase of the Bridgewater Public Service Commission. This brings the number of customers served directly by the Commission to 102,000 with an additional 20,000 served indirectly through bulk sales to other distributing utilities.

During the early winter months of 1969, some difficulties were experienced with the reliability of distribution facilities, part-

icularly in Antigonish and Guysborough Counties. Consequently, an accelerated rehabilitation programme totalling \$5.5 million was announced in January. Substantial progress has already been made in this regard. Similar stepped-up programmes will be undertaken in the next two years, to bring all of our older facilities to higher standards.

One of the factors which is placing a strain on our rural system is the rapidly growing use of electricity in the home. The average annual consumption of our domestic customers, although below the national average, is rising rapidly.

Reflecting these figures are the very encouraging over-all increases in domestic and retail sales. In 1969, retail sales grew by 12.1 per cent, while domestic deliveries climbed by 11.7 per cent over the previous 16-month period, not including the transfer of classifications resulting from the purchases of the Bridgewater and Glace Bay systems. Almost two billion kilowatt hours of energy were delivered, an increase of 6.1 per cent over the 16-month period to March 31, 1969.

Forecasts for the 1970-71 fiscal year portray an even higher rate of growth, as we expect almost as much power will be delivered in the coming 12 months as in the past 16 months. This projection, which indicates the largest increase ever forecast by the Power Commission, is due to the continuance of current commercial and domestic increases plus the addition of several major new industries.

Despite the addition of 230,000 kilowatts of new capacity last year, we anticipate that our present reserves will be fully utilized by 1973, in view of the unusually large load growth forecast. The strong position we have now reached with regard to reserves and sales in the Maritime Power Pool will work to our advantage during the next few years provided fuel prices are maintained at current levels.

Overall, utilities in North America have doubled their generating capacity in the past ten years to keep pace with new demands, but the Power Commission has increased its capacity by three times in the same period. While our future demands are pro-



This picture perhaps best captures the new feeling which is pervading the Power Commission. It is a feeling of excitement, as activity is paced to the tremendous growth within the province. Thoughts of the future become more and more important for the planning of comprehensive service.



jected at more normal levels, we still expect to install an additional 400,000 to 500,000 kilowatts of new generating capacity between now and 1980.

It appears that the great majority of new installations which will make up this additional capacity will be fossil-fueled thermal plants. Almost all of the province's hydro potential has been tapped; the magnitude of our overall system is not yet sufficient to permit economical development of a nuclear station; and, although currently Fundy tidal power may be a possibility, any development appears to be some years away.

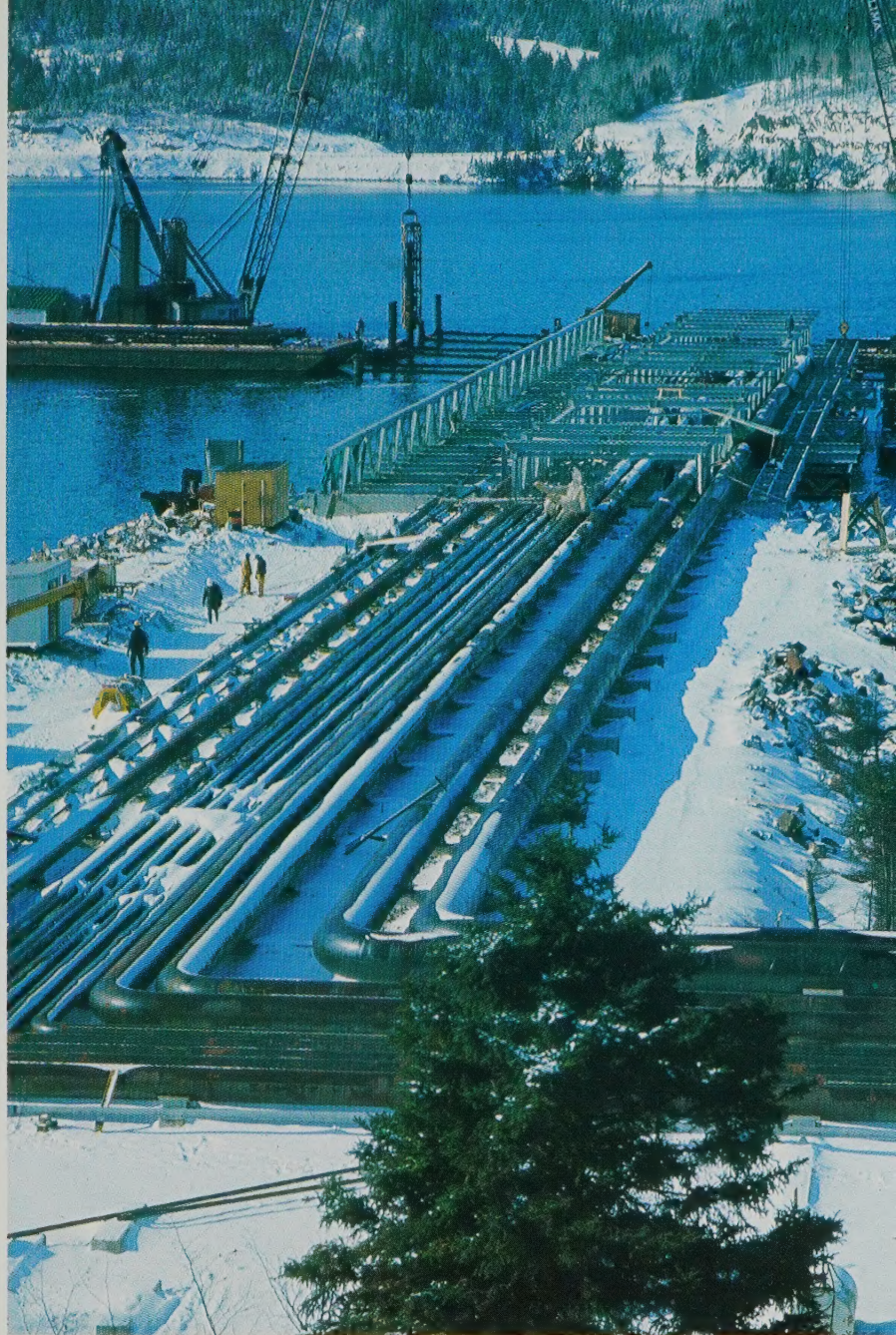
In the face of the inflationary wave which is still persistent across Canada, all utilities are finding themselves in a difficult position. Despite the tightness of the monetary situation, power use continues to expand, dictating major new construction. Here in Nova Scotia, industrial expansion is a requirement that cannot and must not be retarded. The challenge which this presents to the Power Commission is becoming more and more difficult and calls for a close study of our financial position over the next few years.

Our consumers may expect that operating economies will continue to be introduced to combat higher labour, material and interest costs. We have committed ourselves to this line of action, with good success in the past, but if inflationary pressures continue unchecked, costs will outstrip the economies we have introduced.

Comparison of our operation with that of other utilities in the private sector points out the efficiency achieved in spite of a very diverse system and low customer density. Although the Commission serves almost 80 per cent of the province's area



Pioneering has once again come to Nova Scotia, this time in the form of offshore oil exploration. Several rigs similar to the one shown above are currently probing the ocean floor near Nova Scotia. If and when large oil deposits are discovered, it could add considerable impetus to the industrial development of the province.

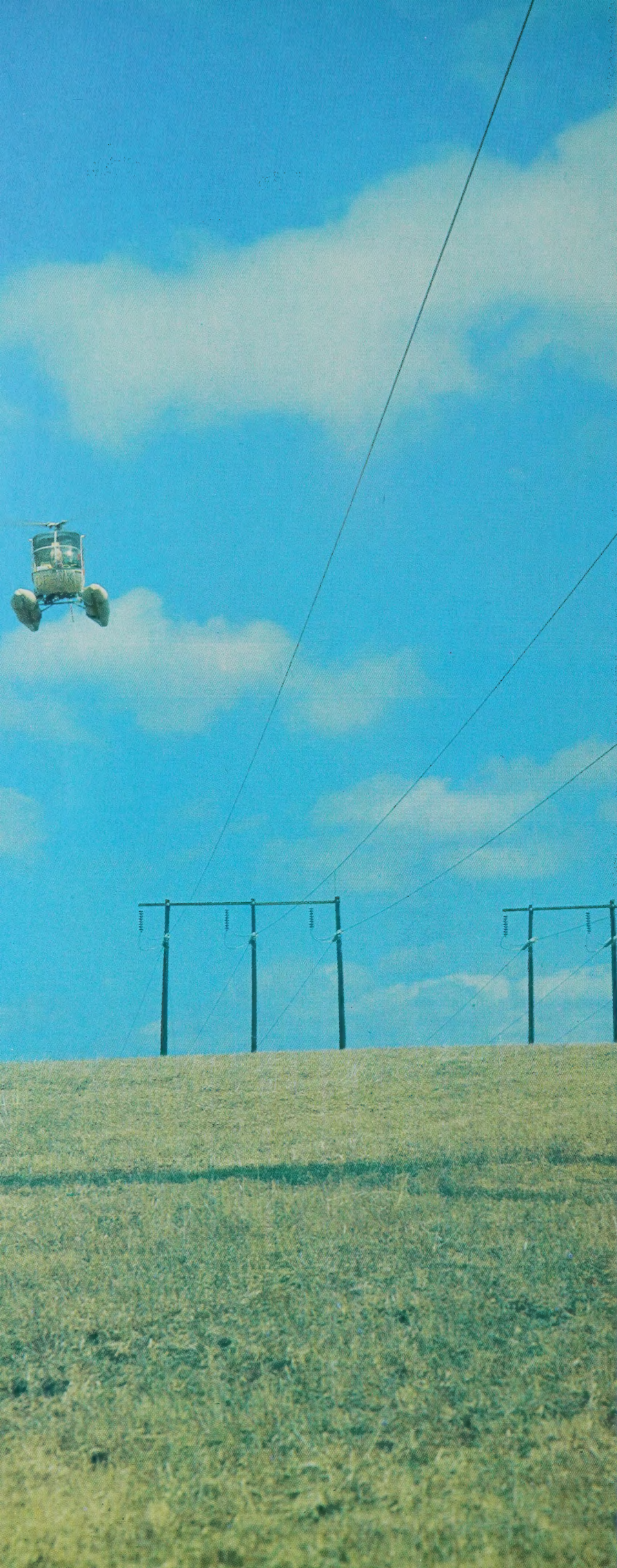


The new industrial complex growing near Port Hawkesbury is perhaps one of the province's most exciting areas. These large pier facilities are being constructed for the new Gulf Oil Refinery located near the Power Commission plant.

through 6500 miles of lines, we serve less than half of Nova Scotia's population.

Our management training program continued throughout the year and appears to be beneficial to the overall policies of the Commission. The recommendations of the group studying the staff organizational structure to determine the most advantageous functional and administrative supervisory arrangements have been implemented.

I wish to express my appreciation to the members of the Commission, and to all employees, whose efforts made it possible for us to accept the challenges of this period of heavy growth and construction. As we



enter our second half-century, I am confident that we will be able to make the record of our next 50 years as noteworthy as that which we have completed.

Respectfully submitted,

L. F. Kirkpatrick
General Manager

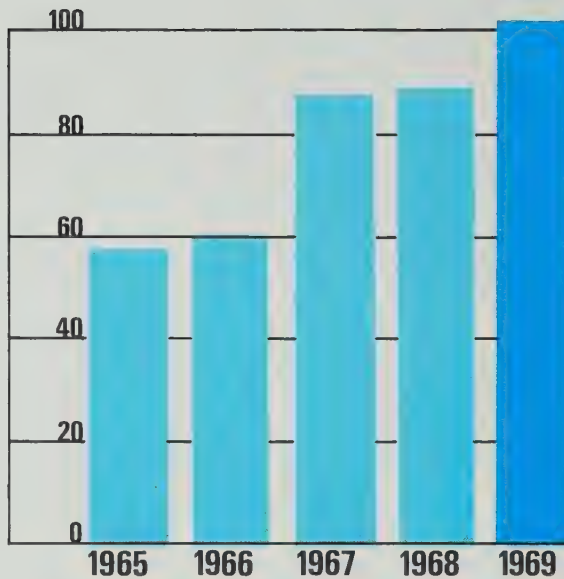


Commission planners and engineers constantly stay abreast of the latest developments in electrical equipment. This new structure enables the substation at Point Tupper to present an aesthetically pleasant appearance, while improving reliability and performance.

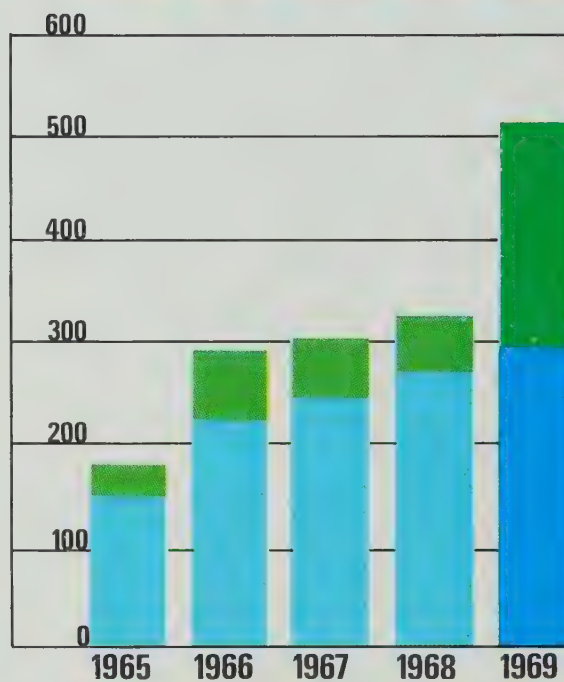


Line patrol and trouble spotting are greatly facilitated by the use of the Commission's helicopter. This versatile machine, which has proven itself over and over again, is shown here patrolling the new high-voltage line from Trenton to Onslow.

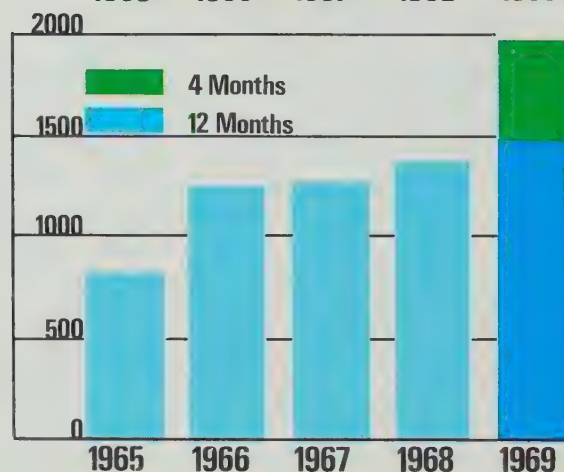




NUMBER OF CUSTOMERS (thousands)



RESERVE CAPACITY
PEAK DEMAND
(megawatts)



KILLOWATT HOURS SOLD (millions)

The largest single thermal unit in the Atlantic Provinces was completed and brought on line on schedule. Three years in construction, the \$27,000,000 Trenton No. 5 is the largest project ever undertaken by the Power Commission.



Operations

The total precipitation as recorded at the Commission's gauging stations for the 12 months period ending March 31, 1970, was average. However, hydro generation was down from last year because of low rainfall amounts over our large storage basins in the western part of the province. Hydro generation for the sixteen month fiscal year totalled 527 million KWH, a decrease of 19.5% or 127 million KWH from sixteen months last year.

Thermal generation totalled 1,372 million KWH, which represents an increase of 168 million KWH or 13.9%. (See page 15.)

Purchases from external sources totalled 288 million KWH as compared with 193 million KWH for last year. The large increase was mainly due to our firm purchase of 20 MW from the New Brunswick Electric Power Commission, which terminated on October 31, 1969. The energy associated with this power was 134 million KWH.

Total deliveries to customers amounted to 1,987 million KWH, an increase of 114 million KWH or 6.1% over last year.

Storage basins at year end were 41% full or 77 million KWH. On March 31 last year, storage basins were 47% full or 90 million KWH.

Operations, the largest single department with the organization, has undergone extensive and significant realignment during the past year, in response to the period of growth which the Commission has been experiencing.

The transmission and distribution systems and hydro sections were grouped in five separate geographical zones: Western, Eastern, Cumberland, Canseau and Eastern Light & Power Company Limited, a wholly-owned subsidiary.

Supporting the field teams are three sub-sections based at Head Office in Halifax. These have been designated as Systems Services, Systems Operations and Distribution Planning and Standards sections.

Normal maintenance work on distribution systems and hydro stations was undertaken

on a continuing basis during the period and a normal amount of extensions and additions was experienced.

However, following several severe early winter storms and a resultant number of power interruptions, it was decided to accelerate the maintenance program, in an effort to up-date all distribution facilities. As a result, the Commission announced on January 21st a \$5.5 million improvement program for the entire Commission area. Much of the work was scheduled for the 1970 fiscal year, but very substantial progress had been made by March 31, the end of our fiscal period.

Similar accelerated rehabilitation programs will be undertaken in the next two years, by which time it is expected all of our distribution facilities will achieve the standards which we desire.

ENERGY SUMMARY KWH

	1968—69 ^{* * *}	1969—70
Hydro Station Output	654,037,185	526,852,045
Thermal Station Output	1,204,014,327	1,371,859,706
Purchases	192,622,280	287,669,300
Total Available	2,050,673,792	2,186,381,051
Deliveries to Customers	1,872,348,618	1,986,530,397
Deliveries to Customers less Grid	1,842,667,118	1,960,736,597

* 16 months from December 1, 1968 to March 31, 1970

* 16 months from December 1, 1967 to March 31, 1969

ENGINEERING AND THERMAL PRODUCTION

An accelerated capital investment program totalling nearly \$70 million in the last four years culminated in 1969. More than \$27 million of capital has been expended in this last 16 months period alone.

The net generating capability of the Power Commission was raised by 70 per cent to 513,000 kilowatts with the completion of units at Point Tupper and Trenton.

Near Port Hawkesbury, Cape Breton, the world's largest back-pressure, radial-flow turbine was synchronized with the system on July 31, 1969. The Point Tupper plant incorporates several unusual features which allow it to produce electricity very economically, almost as a by-product of the steam produced for the near-by heavy water towers.

While this unit was the first of our new generating facilities on line, it had only operated for a total of 890 hours by March 31, of this year. The unit is very closely integrated with the Canadian General Electric heavy water towers, since steam for the generating plant is condensed during use in the heavy water process. Construction of the latter was not sufficiently advanced to permit economical operation of the power station resulting in the restriction of the time use.

The new No. 5 unit at Trenton, the construction of which started in late 1966, was synchronized with the system in September. The 150,000 kilowatt unit logged some 1,500 hours of operation, some at full load, up to the end of March.

A very encouraging sign has been experienced in the operation of Trenton No. 5, the largest thermal unit in the Atlantic Provinces. The ratio of BTU's to kilowatt hours has been dropping during the commissioning period, as the unit more efficiently converts fuel energy into electrical energy. At year end, the average heat rate was 12,141 BTU-KWH. It is expected that this efficiency will be further refined as the competency of the unit is proven.

A net total of 1,371,859,706 kilowatt hours were generated by the four thermal stations



A very common sight last year at either Point Tupper or Trenton was the helmeted welder. As the frenzied period of construction drew to a close, almost 600 construction personnel were at work on the sites of the two new thermal plants.

during the 16 months period, while 760,000 tons of Nova Scotia coal and 323,000 barrels of residual oil were consumed. This is an increase of 13.9 per cent over the net generation of the previous 16 months period.

The program of extension of the provincial and inter-provincial transmission system continued. Some 288 miles of new high-voltage transmission line were given some form of attention during the year and two major projects were completed and placed in service.

The 72 circuit mile line between Trenton and Onslow was constructed in conjunction with Trenton No. 5. A total of 3 circuits now comprise this connection, 2 of which will be used on a regular basis while the 3rd will be held as a standby. A 45 mile, 138,000 volt line between Sheet Harbour and St. John's was also completed and has been placed in service initially at 69,000 volts.

With the continued industrial growth in the province and the extension of high voltage transmission noted above, a high level of activity has been maintained in the design and construction of substations. Major projects either completed or in an advanced stage of construction included those of Trenton, Onslow, Port Hastings, Point Tupper, Canso Chemicals, Lochaber Road (Antigonish), Pictou, Abercrombie, Baddeck, Gulf Oil and several other smaller installations.

The new service center at Milton commenced last year was completed and is in full use. An extension to the Meter Department building at St. Margaret's Bay was completed and provides improved facilities for district line crews and the meter repair and testing department. A new local headquarters was constructed at Inverness.

Repair and renewal work on hydraulic structures was continued with work being carried out at the Lower Lake Falls and Big Falls developments on the Mersey River and at Sandy Lake and Big Indian Lake on the St. Margaret system. In addition to these major projects, numerous smaller works falling into the repair and remedial category were carried out.

In October 1969, the report of the Atlantic Tidal Power Programming Board on the feasibility of tidal power development in the Bay of Fundy was released. The Commission has provided provincial representation on both the Programming Board and the Engineering and Management Committee which carried out the technical studies under direction of the Board. The

studies concluded that because of the intensive capital requirements of tidal power development coupled with the tight money situation and high interest rates now prevailing it is not possible to recommend commencement of construction of tidal power plant in the Bay of Fundy at this time.

The organization of the Engineering Department was restructured during 1969, being broken into four main sections: Thermal Production, Engineering, Systems Planning, and Systems Protection. Each of these sections is headed by a manager, reporting to the Director of Engineering.

The 80,000 kilowatt turbo-generator at Point Tupper is the largest radial-flow, back pressure unit in the world. Its advanced design enables the Power Commission to generate electricity almost as a by-product of the steam manufactured in the plant's massive boilers, and supplied to the near-by heavy water process.



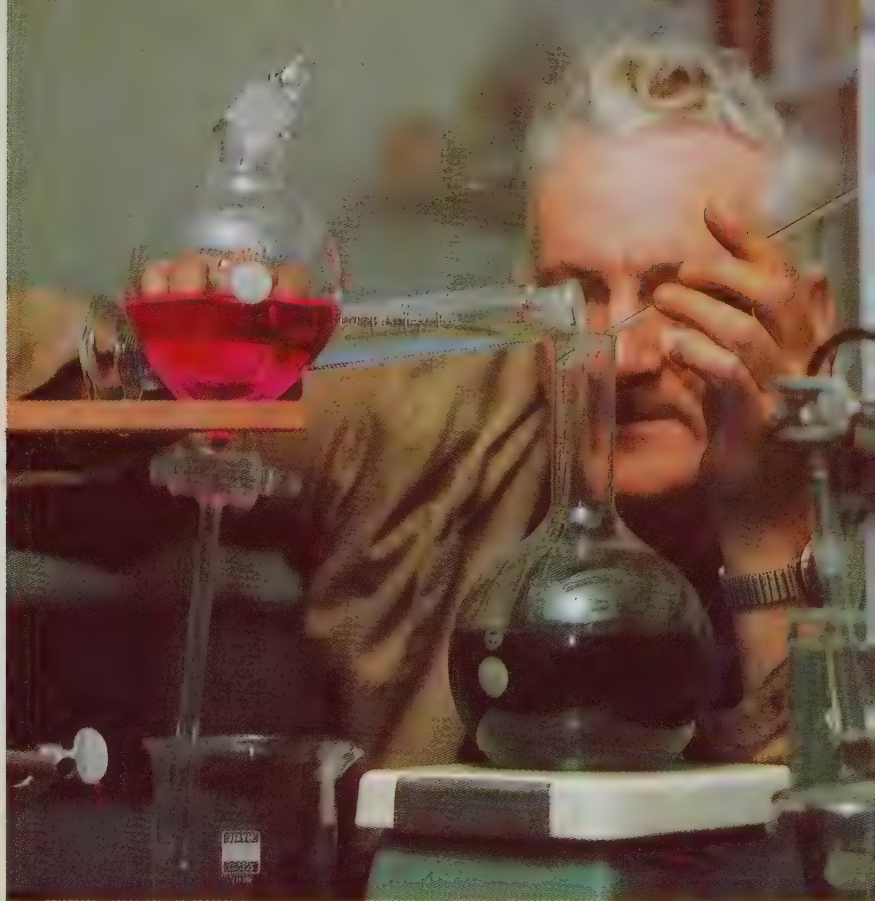
PERSONNEL

The Power Commission has experienced such tremendous growth in the past ten years that assets, generation and number of customers have tripled. By comparison, the national average for electric utilities points to a doubling in size every ten years. Due to this unusual expansion and the resultant increase in managerial work load and to allow for greater efficiencies and increased development in individual abilities, it has been necessary to undertake a major re-organization of executive personnel and a re-alignment of departments within divisions. (See Engineering and Operations Report.)

Executive changes announced during the year were: Mr. A. G. Mahon, formerly Director of Operations to a newly-formed position of Executive Assistant to the General Manager; Mr. L. B. Murphy appointed to Director of Operations; Mr. W. R. Bailly to Director of Personnel; Mr. A. D. Waller to Secretary; and the assimilation of the Commercial Department under Mr. J. A. Parker, Director of Staff Services.

The Commission continued its comprehensive approach to employee training and development during the past fiscal year. Management, supervisory and team development played a large part in the overall training program for the year with a number of seminars and training sessions being held in a continuation of the program begun in 1968. An eight-session secretarial development program was held last spring and was well received by more than thirty participants. The objective of this program was to provide skills which would not be received in normal training.

Because of the addition of new high-pressure plant to our system, thermal plant staff training continued as a high priority item throughout the year. The integration and training of new personnel and the re-training of some of our older employees was a major objective. The use of training manuals, lectures, visits to other utilities and on-the-job training techniques were methods used to accomplish the desired results.



Feedwater used in our thermal plants is constantly checked after purification to insure a minimum of corrosion, and analysis checks are carried out to minimize any contribution which the Power Commission might make to air or water pollution.

Our linemen apprentice program continued to turn out graduates from the Nova Scotia Institute of Technology in Halifax. More than thirty new apprentices were entered into the lineman program during the past fiscal year with graduates numbering about fifteen for the same time period.

Safety played an important part in the Commission's training program with our Safety Officer holding a number of sessions dealing with "pole top rescue" and emergency resuscitation. A continuing program of meetings to better acquaint personnel with safety problems was also carried out.

Negotiations during the summer of 1969 with the IBEW resulted in the signing of a two-year contract, which will terminate May 31, 1971. The new contract covers some 350 regular operating and maintenance personnel in addition to those employed on a casual basis. At Eastern Light and Power Company, a two-year contract was negotiated with the IBEW, terminating September 30, 1970. Also during the year, arrangements were completed with the IBEW whereby 24 employees of the Caledonia Power and Water Board were brought under the jurisdiction of the Eastern Light and Power Contract.

The number of regular employees on staff, (including subsidiary companies) at year's end, stood at 1,020, representing a 10 per cent increase over the past sixteen months.



Almost 400 people attended the opening ceremonies, including suppliers, representatives of all levels of government, members of other utilities, and many other distinguished guests.



Taking part in the official opening of Point Tupper were, from left to right: Mr. L. F. Kirkpatrick, General Manager, Premier G. I. Smith, Chairman, the Honourable A. J. MacEachen, Federal Minister of Manpower and Immigration, and the Honourable Gerald Doucet, Provincial Minister of Education.

✦ In line with the 50th anniversary celebrations, this cake illuminated by 50 candles was served during the reception at the Point Tupper opening. Shown cutting the cake is Mr. S. L. Fultz.

➤ The new 80,000 kilowatt Point Tupper thermal generating station, opened in September, is the central point of the industrial complex near Port Hawkesbury. The plant provides high pressure steam to the Canadian General Electric heavy water plant, a few hundred yards away.





STAFF SERVICES

The Staff Service Division was designed as a unit of industrial engineers and systems analysts, studying systems, methods and procedures in all phases of Commission activity, to increase operating and economic efficiency.

Numerous research studies are currently in progress in this department, with a number being completed in the period being reported.

Faced with expansion of Commission systems, and the subsequent increase in the number of Head Office employees, an economical means of housing all H. O. functions had to be found. Staff Services engineers undertook a study of office facilities, layout systems, communications, and methods of improvement. The most efficient, pleasant, and flexible approach arrived at was the concept of Office Landscaping.

Details will be finalized in the coming months, prior to a move of all Head Office personnel to the top three floors of the N. S. Power Commission Tower, part of Scotia Square. The modern Office Landscape application will be only the third of major size in Canada.

The complex task of transportation and storage of supplies and materials for our field offices came under the scrutiny of this group in 1969. As a result, recommendations were made for central zone stores, maxi-



A new high-rise hotel in Sydney, the Cabot Lodge, was completed during 1969. Using the total electric concept, the building is the largest electric heating installation on Commission lines.



This colorful float was viewed by thousands last summer as the Commission brought the electric heating message to towns and villages throughout the province.



Gone are the shadows and dark corners of many of the province's towns and highway intersections, as new street lights providing maximum visibility are installed. One of the many street lighting projects in which the Commission was engaged last year was the installation of these sodium vapour lights near the provincial border.

mizing the economics of quantity orders, central record keeping and bulk transportation. This system has been introduced in the Western Zone, on a trial basis. From the practical experience gained in this trial, a system will be established for all zones.

A Security Officer was added to staff during the year, to implement the latest security techniques, and to study overall Commission security.

The department was heavily involved with contract negotiations with new industries and large power users, and undertook recommendations for industrial locations.

MARKETING

The best measure of effectiveness of an electric utility's marketing program can be found in commercial, domestic and retail sales growth. The figures for these classifications recorded over the 16-month fiscal period reflect the overall success of our promotions, and the continuing public acceptance of the motto: "Live Better Electrically".

The commercial classification, which includes customers with electric heating, experienced a 12.1 per cent* growth in the

16-month period. Domestic sales increased by 11.7 per cent,* while overall retail sales growth was 12.1 per cent.*

A number of large electric heating installations were completed last year, including the Cabot Lodge in Sydney (containing stores, offices, and apartments), a number of motels and schools; and the Kejimikujik National Park Administration Building. In addition, the number of electrically heated homes continued to increase at an encouraging rate.

More than 2300 new street lights were installed during the fiscal period, an increase of some 55 per cent over the previous year. Power sales to these installations grew by 20.9 per cent.* Some of the larger

The natural environment of Kejimikujik National Park is untarnished by power lines. Underground service provides the power to this new electrically heated administration building and to the street lights in the area.



projects completed were the Lucalox system at the Nova Scotia-New Brunswick border, and a comprehensive system for the town of New Germany.

The Home Service Section was very active. Our Home Economist, fast becoming a well-known figure in the province, made personal contact with 23,000 people through cooking school and group demonstrations. Six television appearances were also completed with enthusiastic response.

The Commission's very original float, depicting a fire-breathing dragon carried the electric heating message through some 20 parades throughout the province. A number of prizes were received by the Commission for this community effort. The float is an important contribution to the celebrations of these communities, and continues to be well received.

The section undertook six promotions during the year, which took the form of multi-media, advertising, and integration, with "Live Better Electrically Dealers." These included electric heating, washer and dryer combinations, flameless ranges, safe wiring and the Commission's Home Modernization Plan.

The Home Modernization Plan, designed to assist Commission customers at low interest rates, proved very popular in 1969. Some 1,875 contracts were approved for appliances and wiring. Each contract holder is contacted in letter form by the Commission providing reminders for guarantees, tips on use and care, and maintenance procedures for the appliance.

Two television specials, featuring the Ringling Brothers and Barnum and Bailey Circus, and Peggy Flemming, were sponsored jointly by the Commission and the Canadian Electrical Association, with excellent response.

PUBLIC RELATIONS

The emphasis of the Public Relations Section centered around celebrations of the Commission's 50th Anniversary. A special logo for use during 1969 was prepared, and saw considerable usage.

During the year, writing and editing of the Commission's history, a comprehensive document tracing 50 years of progress, was completed. This document is now available by request from the Section.

The highlight of 1969 was the official opening of the Point Tupper Thermal Generating Station. This event, which consumed several months of planning and preparation, attracted almost 400 guests and received publicity all across Canada. (See pages 18 and 19.)

A planned series of advertisements was placed in national and international newspapers, promoting the province as an industrial location.

In addition, improvements were implemented in both internal and external communications, to foster better understanding of the Commission, its operations and its problems.

*

These statistics are for 16 months to March 31, 1970, as compared with 16 months to March 31, 1969. Annual Growth is slightly greater, as growth in the four months of December 1, 1968 to March 31, 1969, is common to both 16 month periods.



FINANCIAL REPORT

The consolidated financial statements accompanying this Report incorporate the Statements of the Nova Scotia Power Commission and its wholly-owned subsidiaries, Seaboard Power Corporation Limited, Eastern Light & Power Company Limited, and Dominion Utilities Company Limited.

By amendment to the Power Commission Act, the fiscal year end of the Commission has been changed from November 30th to March 31st. For the initial period only, the Commission adopted a sixteen month fiscal period; consequently, comparisons with a previous period have been omitted from the Statement of Operations.

Income was \$33,304,120 for the sixteen months ended March 31, 1970. After providing \$33,086,142 for costs of operation, including interest and depreciation, the sum of \$217,978 was available for transfer to General Reserve.

Negotiations were completed during 1969 for the purchase of the electric utilities operated by the Town of Bridgewater and the Town of Glace Bay. These utilities have been integrated with the Commission operation and form a substantial addition to the organization. Billing and collecting functions related to these newly purchased utilities have been successfully converted to the Commission's computer program.

Capital funds borrowed during the period on a long term basis from the Northern Canada Power Commission, under the auspices of the Atlantic Provinces Power Development Act, exceeded \$15,250,000. Additionally, \$5,787,853 was received from the Federal Government as the balance of the non-refundable grant of \$12,000,000 toward the construction of the 150,000 kilowatt plant extension at Trenton. The remainder of the Commission's capital work program for the period was financed with internal funds and short term borrowings.

The high cost of borrowing money to finance essential Commission expansion has had a significant impact on the financial operations of the organization. This factor, combined with generally increasing costs, has diminished the excess of revenue over

cost to a situation only slightly in excess of break even. The challenge of increasing costs has been successfully met for a long period; however, inflationary pressures of the proportions experienced in recent years are tending to offset the constantly improving efficiency achieved by the organization.

Notwithstanding the demands made by serving a large, sparsely populated area of the province, and those of an expanding industrial economy requiring large blocks of power, the Commission has demonstrated its ability to meet these challenges to the satisfaction of both our customers and ourselves. Although the Commission does not pay income taxes; it did pay municipal land taxes and grants in lieu of taxes in the order of \$1,166,000 during the period under review.

Consolidated Balance Sheet

March 31, 1970
with comparative figures for November 30, 1968

ASSETS	1970	1968
Fixed Assets		
Land, buildings, plant and equipment at cost less accumulated depreciation — Note 1	\$136,787,913	<u>\$112,934,804</u>
Investments at cost	89,485	<u>\$ 264,231</u>
Sinking fund held by bondholders' trustees	272,281	<u>\$ 234,655</u>
Current assets		
Cash	\$ 180,174	\$ 382,192
Accounts receivable less allowance for doubtful accounts	5,183,254	5,520,303
Materials, supplies and merchandise inventories at cost	1,576,549	1,169,850
Prepaid expenses	<u>88,001</u>	<u>154,125</u>
	7,027,978	\$ 7,226,470
Bond discount less amortization	372,586	395,398
Federal Coal Subvention assets held in trust	<u>1,175,989</u>	<u>775,925</u>
	<u>\$145,726,232</u>	<u>\$121,831,483</u>

APPROVED ON BEHALF OF THE COMMISSION:

G. I. Smith, Q.C. Chairman

R. C. Fraser, C.A. Treasurer

AUDITORS' REPORT

The Chairman and Commissioners
The Nova Scotia Power Commission

We have examined the balance sheet for The Nova Scotia Power Commission as at March 31, 1970, and the statements of operations and funds for the period then ended. We have also examined the balance sheet for the wholly-owned subsidiary companies as

Consolidated Balance Sheet

March 31, 1970
with comparative figures for November 30, 1968

LIABILITIES	1970	1968
Long term debt — Note 2	\$114,958,990	<u>\$100,333,160</u>
Contributed capital	1,256,206	<u>\$ 1,199,155</u>
Reserves		
General —	\$ 3,673,498	\$ 3,185,520
Stabilization and equalization of rates —	699,930	969,930
Contingency	<u>200,000</u>	<u>200,000</u>
	4,573,428	\$ 4,355,450
Deferred credit — Note 3	3,045,471	
Current liabilities		
Short-term loans	\$14,025,075	4,701,428
Instalments due on long-term debt within one year	2,304,215	2,814,262
Accounts payable and accrued wages	2,976,997	4,191,425
Accrued interest	<u>1,028,589</u>	<u>3,234,041</u>
	20,334,876	\$ 14,941,156
Customers deposits and accrued interest	381,272	226,637
Federal Coal Subvention — contra	<u>1,175,989</u>	<u>775,925</u>
	<u>\$145,726,232</u>	<u>\$121,831,483</u>

at March 31, 1970, and the statements of operations, general reserve and funds for the period then ended. Our examinations included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at March 31, 1970, and the results of their operations and the source and application of their funds for the period then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

LEE & MARTIN

Chartered Accountants

Supplementary Balance Sheet Information

- The consolidated statements to March 31, 1970 include The Nova Scotia Power Commission and its wholly-owned subsidiaries, Seaboard Power Corporation Limited, Eastern Light & Power Company Limited and Dominion Utilities Company Limited.

The assets of the Nova Scotia Power Commission and its subsidiaries are recorded at historical cost less allowance for depreciation.

Consolidation of the account produces a difference of \$2,135,352 between the investment made on a going concern basis and valuation on historical costs.

This amount is included in fixed assets.

SCHEDULE OF FIXED ASSETS

Gross Fixed Assets	\$201,824,296
Less: Government of Canada Grants	<u>12,112,800</u>
	\$189,711,496
Less: Accumulated Depreciation	<u>52,923,583</u>
Net Fixed Assets	<u>\$136,787,913</u>

- Long-term Debt

Loans from Province of Nova Scotia	\$ 53,170,593
Loans from Northern Canada Power Commission	55,187,597
Canada Electric Company Ltd. bonds 4 % 1972	407,500
Canada Electric Company Ltd. bonds 4½% 1972	423,000
Pictou County Power Board bonds 3¼ % 1974	200,000
Pictou County Power Board bonds 5½% 1979	300,000
Seaboard Power Corporation 1st mortgage serial bonds —	
4 % Series "A" 1971	130,000
5½% Series "B" 1975	625,000
4½% Series "C" 1977	784,000
5¾% Series "D" 1979	900,000
Eastern Light & Power Company Limited	
1st mortgage 5¾% Series "A" S.F. bonds 1985	2,425,000
General mortgage S.F. bonds 4 % 1972	249,500
Guaranteed serial bonds Town of Glace Bay	
15 year serial bonds 4½% 1971	\$ 6,000
15 year serial bonds 6 % 1976	20,800
20 year serial bonds 5¼% 1982	30,000
20 year serial bonds 5¾% 1982	<u>100,000</u>
	<u>156,800</u>
	<u>\$114,958,990</u>

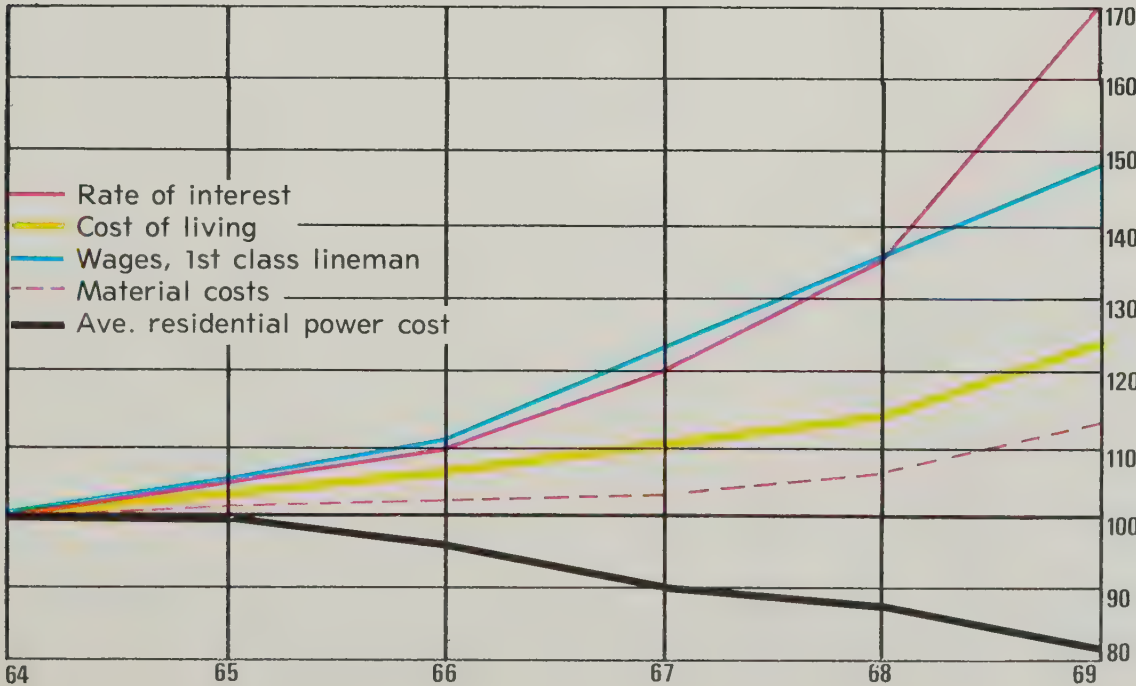
- Deferred Credit

Funds supplied by the Government of Canada to provide lower power costs to industrial users to meet contractual commitments of the Commission.

\$ 3,045,471

Consolidated Statement of Operations
for the sixteen month period ended March 31, 1970

Revenue	
Electric	\$31,831,976
Steam	943,106
Other	<u>529,038</u>
Total revenue	<u>\$33,304,120</u>
Cost of operations	
Cost of power generated and purchased	\$14,543,745
Operating maintenance and general expenses	4,742,914
Interest and bond discount	6,725,768
Taxes and grants in lieu of taxes	1,166,334
Depreciation	<u>5,907,381</u>
	<u>\$33,086,142</u>
Available for transfer to General Reserve	<u>\$ 217,978</u>



**The Nova Scotia Power Commission
and Wholly-Owned Subsidiary Companies**

Inflow and Outflow of Funds

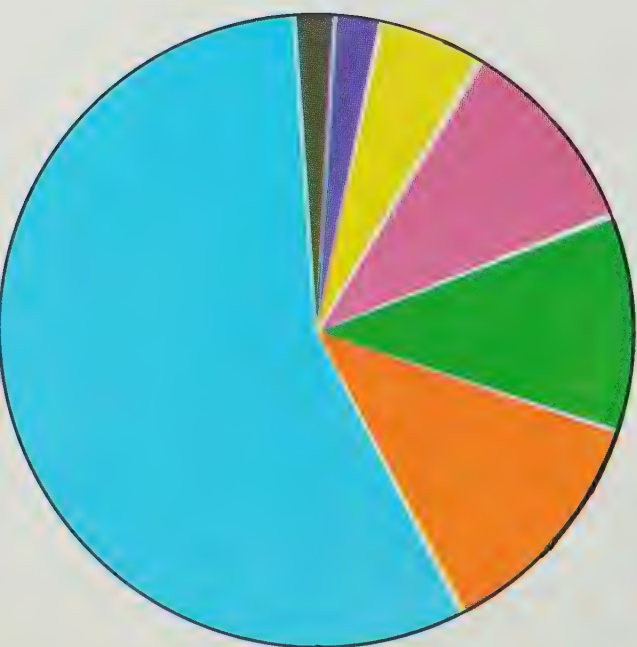
PERIOD 16 MONTHS TO MARCH 31, 1970

TOTAL FUNDS \$62,727,000



INFLOW

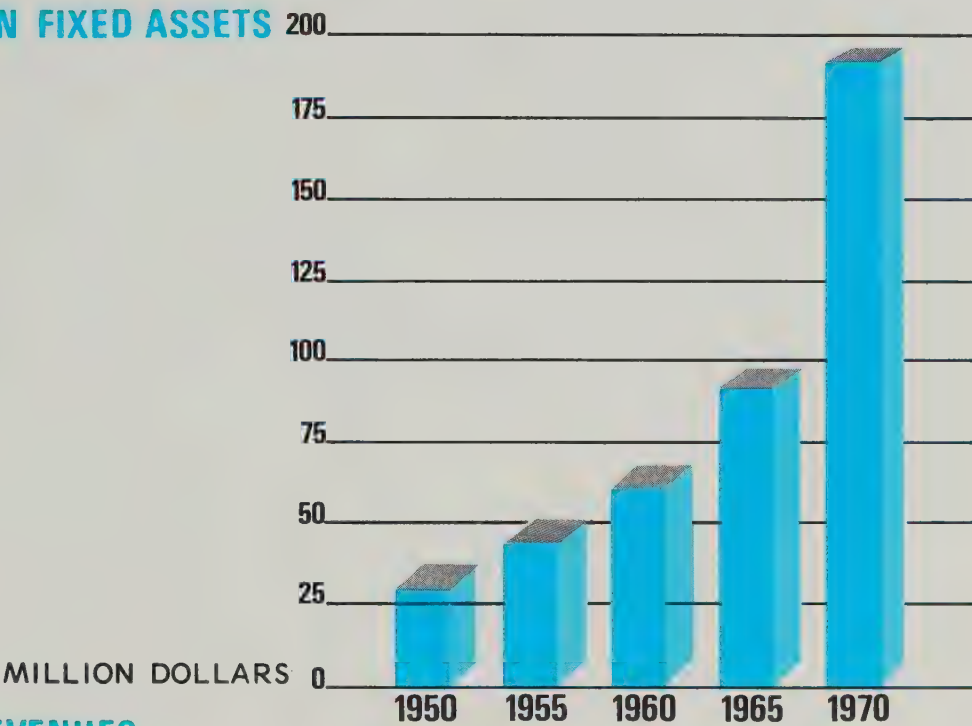
STREET LIGHTING MISCELLANEOUS STEAM	\$2,711,000
INDUSTRIAL REVENUE	\$3,883,000
GOVERNMENT OF CANADA GRANT	\$5,788,000
COMMERCIAL REVENUE	\$6,178,000
NET INCREASE IN WORKING CAPITAL DEFICIT	\$8,661,000
DOMESTIC REVENUE	\$10,319,000
WHOLESALE REVENUE	\$10,599,000
CAPITAL DEBT BORROWING — NET	\$14,588,000



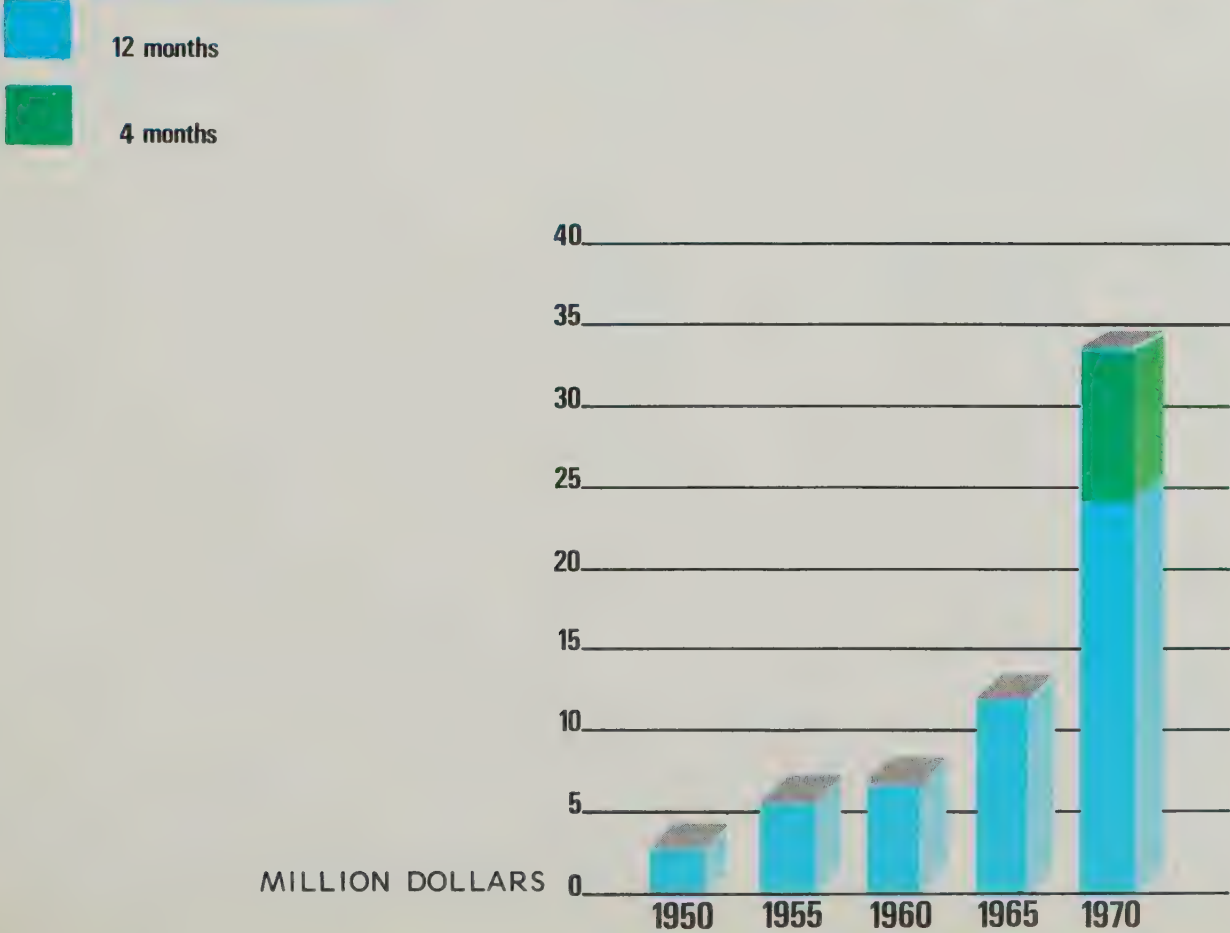
OUTFLOW

TAXES AND GRANTS IN LIEU OF TAXES	\$1,166,000
PURCHASED POWER	\$1,273,000
OTHER MATERIALS AND SERVICES	\$3,556,000
INTEREST AND FIXED CHARGES	\$6,726,000
FUEL	\$6,967,000
OPERATING SALARIES AND WAGES	\$7,491,000
ADDITIONS TO FIXED ASSETS	\$35,548,000

INVESTMENT IN FIXED ASSETS



OPERATING REVENUES



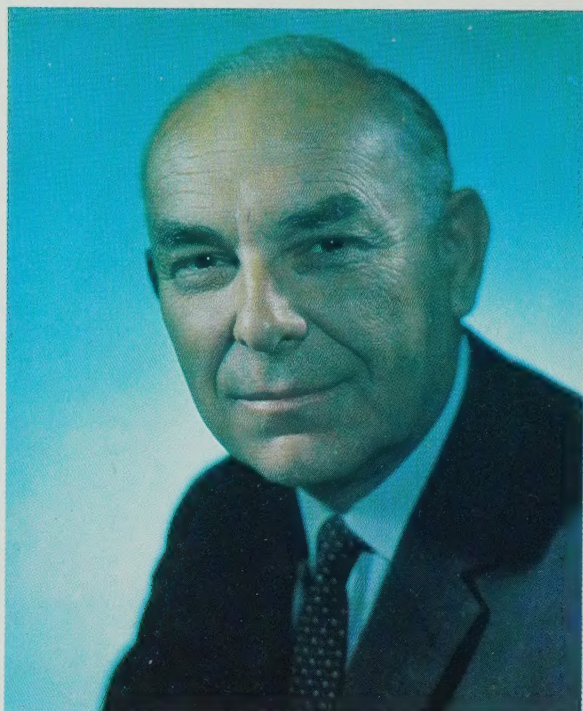
Statement of Operating and Physical Statistics

16 months to March 31, 1970
with comparative figures for
12 months to November 30, 1960

	N.S.P.C. and Subsidiaries 1970	N.S.P.C. 1960
1. Total Revenue	\$ 33,304,120	\$ 6,319,997
2. Total Assets	\$ 197,473,826	\$ 73,286,459
3. Funded Debt	\$ 114,958,990	\$ 51,767,021
4. Percentage of Funded Debt to Total Assets	58.21	70.64
5. Fixed Assets	\$ 189,711,496	\$ 62,040,322
6. Accumulated Depreciation	\$ 52,923,583	\$ 17,165,767
7. General and Special Reserves	\$ 4,573,428	\$ 852,279
8. Number of Customers		
Electric - Wholesale	70	44
- Retail	99,368	33,901
- Street Lighting	2,993	143
Water - Retail	2,950	—
9. K.W.H. Delivered	1,987,000,000	583,000,000
10. Generating Stations		
Hydro	20	20
Steam	5	1
Diesel	2	2
11. Turbines in Service		
Hydro	39	37
Steam	17	4
Diesel	4	4
12. Net K.W. Generating Capability		
Hydro Turbines	104,000	86,000
Steam Turbines	408,000	60,000
Diesel Units	1,000	2,000
13. Miles of Line		
Transmission 36 KV and over	1,391	920
Transmission and Distribution below 36 KV	5,055	4,022
Submarine Cable	16	11
14. K.W.H. Capacity of Created Storage Basins	191,000,000	196,000,000

These panels at the newly completed
Trenton No. 5 house some of the most
sophisticated control equipment to be found
on the continent.





Honourable G. I. Smith, Q. C.
Chairman

Commissioners:

S. Bruce Chandler

H. W. L. Doane, B.Sc., D. Eng., P. Eng.

J. Craig MacDonald

Roderick J. MacSween, L.L.D.

Ronald G. Smith

Executive Staff:

L. F. Kirkpatrick, D.S.O., B.E., P. Eng.
General Manager

A. G. Mahon, B.Sc., P. Eng.
Executive Assistant to the General Manager

W. R. Bailly, B. Comm.
Director of Personnel

R. C. Fraser, B. Comm., C.A.
Treasurer and Chief Financial Officer

G. D. Mader, B.Sc., B.E., P. Eng.
Director of Engineering

L. B. Murphy, B.Sc., B.E., P. Eng.
Director of Operations

J. A. Parker, B.Sc., P. Eng.
Director of Staff Services

A. D. Waller
Secretary

